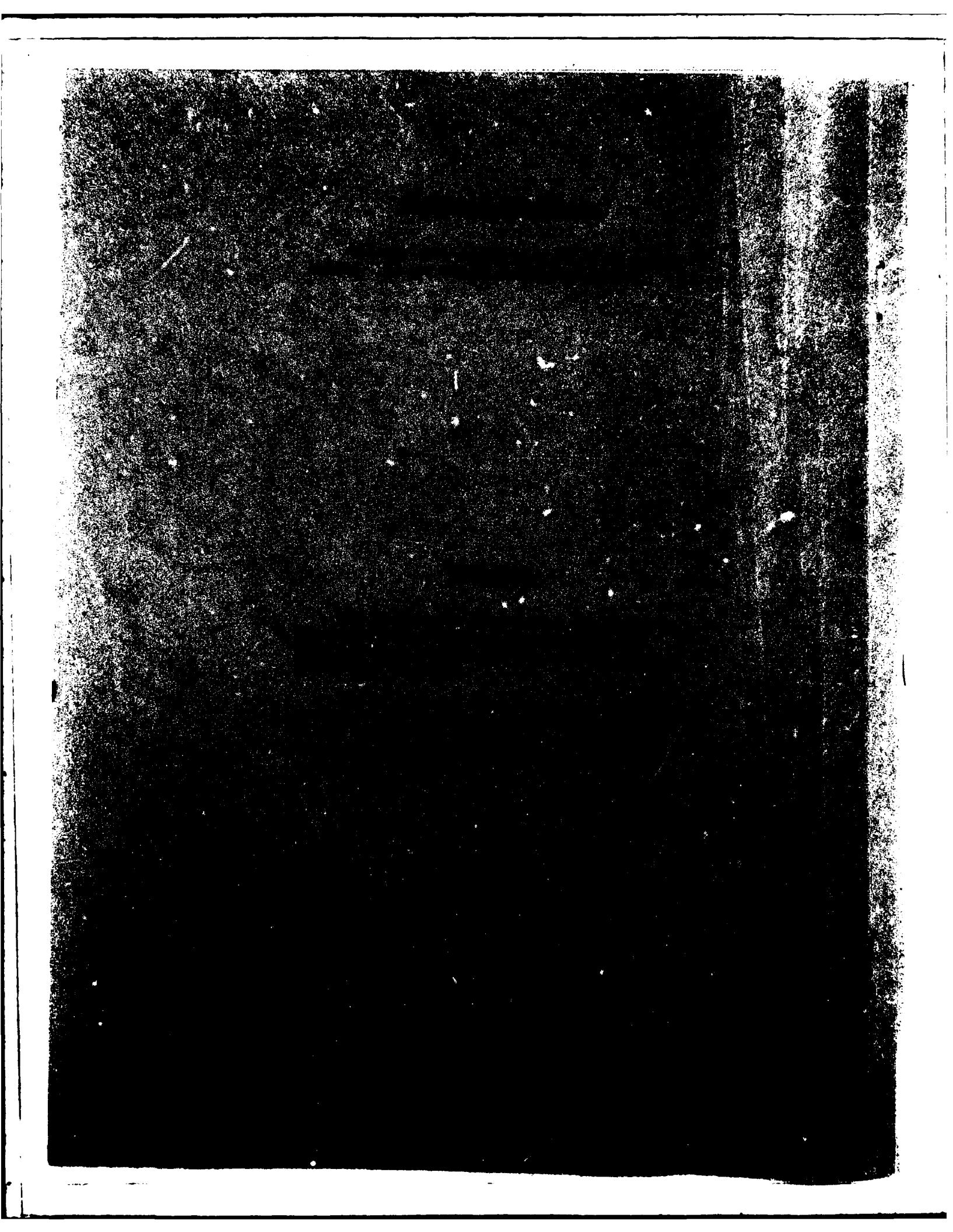


AD-A103 673 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2  
12821A LANCE, MISSILE NUMBER 4572, ROUND NUMBER 367-MCL, 16 JUL--ETC(U)  
JUL 81  
UNCLASSIFIED ERAUCOM/ASL-DR-1194

NL

END  
DATE  
JUL 81  
9 - RI  
DTIC

AD A103673



*12821A LANCE*  
SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
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4. TITLE (and Subtitle) 12821A LANCE Missile Number 4572 Round Number 367-MCL 16 July 1981		5. TYPE OF REPORT & PERIOD COVERED
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 12821A LANCE, Missile Number 4572, Round Number 367-MCL presented in tabular form.		

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Accession For	NTIS CR&I	DTIC Type	Classification	Justification
By	Distribution/	Availability Codes	Anal and/or	Special
DIST	A	A		

## INTRODUCTION

12821A LANCE, Missile Number 4572, Round Number 367-MCL, was launched from RATSCAT, White Sands Missile Range (WSMR), New Mexico, at 1000 MDT on 16 Jul 1981. The scheduled launch time was 1000 MDT.

## DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

## 1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ( $^{\circ}\text{C}$ ), relative humidity, dew point ( $^{\circ}\text{C}$ ), density ( $\text{gm/m}^3$ ), Wind direction and speed, and cloud cover were made at the **RATSCAT** Met Site at T-0 minutes.

(2) Monitor of wind speed and direction from one anemometer was provided in was provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from Double Theodolite Pilot-Balloon observations at:

#### SITE AND ALTITUDE

## RATSCAT

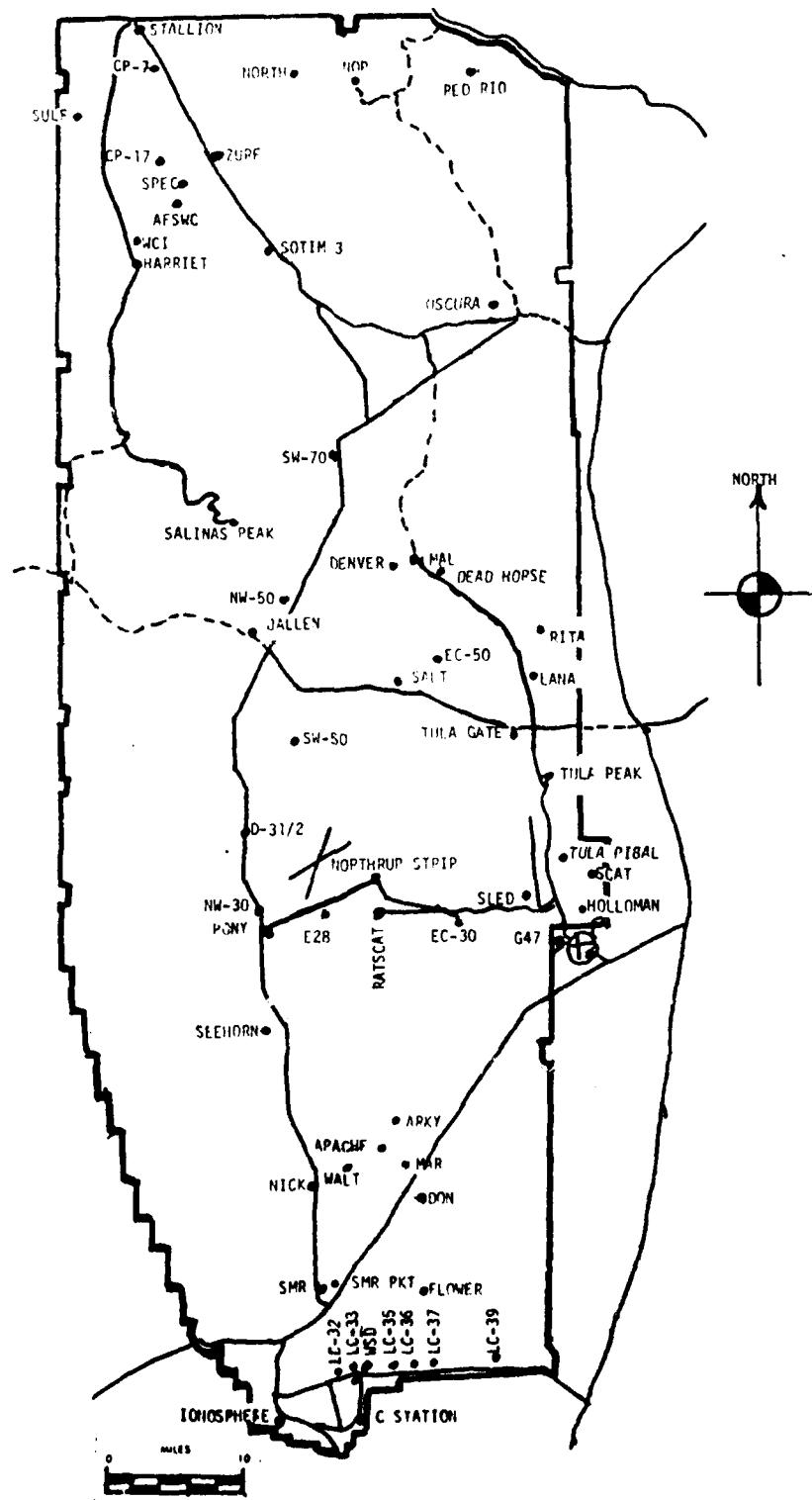
T-10 mins to 1140 Meters  
T-0 mins to 2100 meters

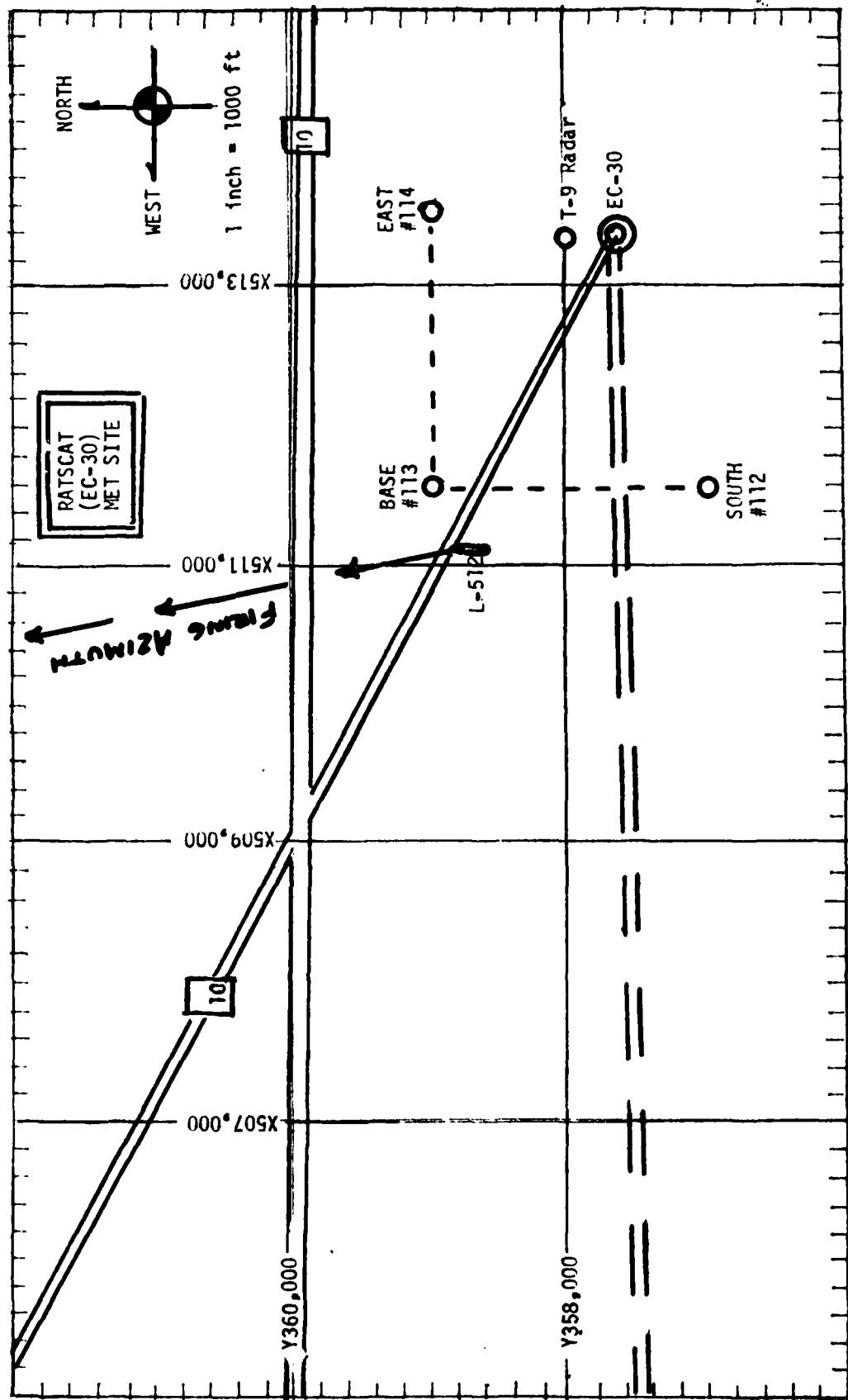
(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to high as possible in 500-feet increments.

#### SITE AND TIME

JAL 0630 MDT  
JAL 0950 MDT  
HMS 0950 MDT

## WSMR METEOROLOGICAL SITES





## PROJECT SURFACE OBSERVATION

TABLE 1

DATE 16 MONTH July YEAR 81

TIME M.D.T	PRESSURE mb	TEMPERATURE °C	DEW POINT °C	RELATIVE HUMIDITY %	DENSITY gm/m <sup>3</sup>	WIND DIRECTION deg	WIND SPEED kts	CHARACTER kts	VISIBIL- ITY
1000	880.1	26.8	21.0	71	1.007			CALM	50

OBSTRUCTIONS TO VISIBILITY	CLOUDS			REMARKS		
	1st LAYER AMT	TYPE	HGT	2nd LAYER AMT	TYPE	HGT
1	CU	7000	2	C1	20000	

## PSYCHROMETRIC COMPUTATION

TIME:	1000		
DRY BULB TEMP.	26.8		
WET BULB TEMP.	22.5		
WET BULB DEPR.	4.3		
DEW POINT	21.0		
RELATIVE HUMID.	71		

## PILOT BALLOON MEASURED WIND DATA

TABLE 2

RELEASED FROM RATSCAT

DATE 16 July 1981

TIME 0950 MDT

COORDINATES (WSTM) X= 511,590.12 Y= 358,916.11 H= 3953.19

NOTE: WIND DIRECTIONS ARE REFERENCED TO D/T

HEIGHTS ARE METERS AGL X OR FEET AGL \_\_\_\_\_.

## PILOT BALLOON MEASURED WIND DATA

TABLE 3

RELEASED FROM RATSCAT DATE 16 July 1981 TIME 1000 MDT

COORDINATES (WSTM) X= 511,590.12 Y= 358,917.11 H= 3953.11

NOTE: WIND DIRECTIONS ARE REFERENCED TO D/T.

HEIGHTS ARE METERS AGL X OR FEET AGL \_\_\_\_\_

HEIGHT AGL	DIRECTION DEGREES	SPEED KNOTS
SFC		CALM
60	217	01
120	209	02
180	197	03
240	189	04
300	184	06
360	180	07
420	177	09
480	178	10
540	182	10
600	189	10
660	198	08
720	202	07
780	194	07
840	190	08
900	187	09
960	186	10
1020	180	10
1080	172	11
1140	165	11
1200	163	11
1260	162	11
1320	160	10
1380	161	09
1440	161	09
1500	161	09
1560	160	09
1620	160	08

COMPUTER MET MESSAGES

HMS 0950 MDT	JAL 0950 MDT
METCM1329061	METCM1332065
161590126876	161590124875
00320002 30040876	00000000 30190875
01322088 30030866	01296004 29960865
02297010 29780842	02304003 29700841
03328013 29530804	03267007 29430803
04298008 29199758	04341008 29090758
05306005 28830715	05318009 28730714
06410005 28460674	06573006 28400673
07390012 28090634	07373010 28060633
08385012 27700597	08402012 27670596
09399008 27410561	09411012 27400560
10344003 27050527	10398008 27070526
11343007 26670495	11356012 26700494
12367009 26280449	12359009 27230448
13372008 25740394	13376013 25750393
14274006 25010344	14307009 25020344
15264010 24230300	15301011 24250300
16294010 23450260	16286013 23410260
17338009 22660224	17338008 22630224
18587007 21880193	18605004 21880192
19064009 21110164	19034010 21270164
20172012 20640140	20069005 20650140
21314011 20420118	21243012 20320118
22190011 20540100	22226010 20560100
23191015 20662085	23201010 20560085
24184022 20860072	24193019 20680072
25191020 01310062	25180028 21200061
26182020 21620053	26161018 21540052

STATION NUMBER 45100 FTT 71  
16 JULY 1 0600 hrs MOT  
ASC. 1500.0.  
71

STATION COORDINATES  
10700, 00711  
JULLEN

GLOBAL COORDINATES  
33.16712 LAT DEG  
106.49511 LONG DEG

TABLE 5  
PRESSURE OF ATMOSPHERE  
IN MILLIBARS (M. FEEt)  
TEMPERATURE  
IN DEGREES CENTIGRADE  
AIR DEW POINT  
IN PERCENT

	PRESSURE OF ATMOSPHERE IN MILLIBARS (M. FEEt)	TEMPERATURE IN DEGREES CENTIGRADE	AIR DEW POINT IN PERCENT	KEL. DEG.
676.1	4051.0	20.2	15.4	65.0
673.0	4132.2	20.4	14.3	68.0
560.0	4580.1	22.6	14.7	61.0
350.0	4914.7	21.8	13.4	59.0
765.2	7394.3	17.6	9.5	57.0
700.0	10573.7	11.8	4.5	51.0
668.4	11640.9	9.4	3.4	66.0
635.4	13015.4	6.0	1.5	73.0
596.6	14702.5	2.1	-5.1	59.0
583.0	15313.9	0.8	-5.8	71.0
565.8	16105.1	-0.2	-1.0	63.0
540.0	17302.9	-1.9	-7.0	68.0
524.2	18107.2	-3.6	-9.4	61.0
512.6	18687.5	-5.6	-7.4	67.0
507.6	18940.7	-5.6	-6.2	62.0
560.0	19350.1	-6.0	-10.6	70.0
483.8	20177.6	-7.2	-9.3	65.0
456.4	21666.7	-10.0	-11.7	57.0
449.2	22069.0	-12.2	-13.1	93.0
441.6	22498.6	-12.4	-13.3	93.0
426.6	23366.7	-13.4	-14.5	91.0
419.4	23793.1	-15.8	-17.7	72.0
407.4	24516.7	-15.8	-19.2	75.0
400.0	24971.1	-16.7	-21.7	65.0
378.8	26310.2	-19.8	-23.1	75.0
369.4	26922.5	-21.3	-25.0	72.0
365.2	27200.2	-21.5	-24.5	48.0
344.6	28604.0	-23.4	-35.2	40.0
331.4	29539.6	-26.2	-35.7	49.0
300.0	31084.6	-31.6	-47.4	19.0
250.0	36040.5	-42.1	-44.8	42.0
200.0	40880.1	-54.7		
180.8	42084.4	-59.6		
171.6	44037.3	-59.5		
150.0	46798.8	-65.3		
131.0	49403.0	-70.6		
113.8	52245.6	-69.4		
109.8	54627.5	-70.5		
100.0	54764.0	-69.4		
91.6	56523.8	-68.6		

STATION ALTITUDE 4051.00 FEET MSL  
16 JULY 01 0630 HRS MDT  
ASSEMBLION NO. 71

SIGNIFICANT LEVEL DATA  
1970030071

GEODETIC COORDINATES  
53.16712 LAT DEG  
106.49511 LON DEG

TABLE 5 (con't)

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE METERS MSL	TEMPERATURE		
		AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
83.0	58103.8	-68.4	-68.4	
77.6	59819.5	-67.2	-67.2	
74.8	60556.7	-64.2	-64.2	
70.0	61093.0	-65.4	-65.4	
67.0	62773.8	-65.1	-65.1	
60.0	65029.2	-58.6	-58.6	
53.0	67598.4	-59.6	-59.6	
50.0	68809.8	-57.0	-57.0	
30.0	79644.4	-51.2	-51.2	
24.0	84448.9	-50.7	-50.7	
20.0	88425.6	-45.6	-45.6	
14.6	95459.9	-39.8	-39.8	

STATION ALTITUDE 4650 FEET MDT  
16 JULY 31  
ASCENSION 140. 71

UPPER AIR DATA  
197003.071  
JALLEN

GO OUT COORDINATES  
33.16712 LAT DEG  
106.49511 LONG DEG

TABLE 6

GEOPHYSIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DESLITY GM/CUBI. METER	SPD OF SOUND KNOTS	DIRECTION DEGREES (TN)	IND DATA SPEED KNOTS	IND DATA OF REFRACT 101.
4050.0	870.1	20.2	13.4	65.0	1033.5	669.5	•0	•0	1.000298
4500.0	862.4	22.2	14.6	62.3	1009.8	672.0	170.2	•8	1.000298
5000.0	847.4	21.7	13.3	58.9	994.5	671.2	176.2	1.7	1.000288
5500.0	832.6	21.0	12.6	58.6	979.7	670.4	170.4	2.7	1.000282
6000.0	818.1	20.3	11.8	58.3	965.0	669.5	170.0	3.2	1.000276
6500.0	805.8	19.6	11.1	57.9	950.6	665.6	150.5	3.2	1.000270
7000.0	789.7	18.9	10.3	57.6	936.5	667.7	157.1	3.1	1.000265
7500.0	775.9	18.2	9.6	57.3	922.5	666.9	188.6	3.2	1.000259
8000.0	762.3	17.4	8.8	57.2	909.0	665.9	201.0	5.0	1.000254
8500.0	749.7	16.2	7.9	58.0	896.6	664.5	204.4	7.2	1.000248
9000.0	735.4	15.0	7.0	58.8	884.5	663.5	202.3	6.8	1.000243
9500.0	722.3	13.8	6.1	59.6	872.4	661.6	202.2	6.5	1.000238
10000.0	709.5	12.7	5.2	60.4	860.6	660.2	209.7	6.6	1.000233
10500.0	696.8	11.6	4.4	61.5	848.7	658.9	215.8	7.6	1.000228
11000.0	684.2	10.6	4.0	63.5	830.2	657.7	218.7	9.7	1.000225
11500.0	671.8	9.7	3.5	65.4	823.9	656.6	219.9	11.7	1.000221
12000.0	659.6	8.5	2.9	67.8	812.3	655.2	220.2	13.7	1.000217
12500.0	647.6	7.3	2.3	70.4	801.1	653.6	218.1	14.9	1.000213
13000.0	635.8	6.0	1.6	72.9	790.1	652.3	215.2	15.8	1.000209
13500.0	624.0	4.9	•3	66.0	779.0	650.8	211.7	16.3	1.000203
14000.0	612.5	3.7	-2.3	64.8	761.1	649.3	208.2	16.8	1.000197
14500.0	601.1	2.6	-4.2	60.7	757.4	647.8	209.2	16.4	1.000191
15000.0	589.9	1.5	-4.4	64.8	746.3	646.5	212.0	15.8	1.000186
15500.0	578.9	•7	-4.3	69.1	734.4	645.6	221.7	14.7	1.000186
16000.0	566.1	•3	-5.7	64.1	721.8	645.1	231.6	13.6	1.000181
16500.0	557.4	-5.5	-6.3	64.6	710.3	644.1	242.3	12.5	1.000178
17000.0	549.9	-1.4	-6.7	66.7	699.2	643.1	230.5	10.8	1.000175
17500.0	539.5	-2.3	-6.8	71.2	686.3	642.0	227.6	8.5	1.000172
18000.0	529.4	-3.4	-6.4	79.3	677.6	640.7	259.6	5.8	1.000171
18500.0	516.3	-5.0	-7.1	85.1	668.9	638.8	234.6	2.9	1.000168
19000.0	509.4	-5.7	-8.5	80.2	658.0	637.9	221.8	1.4	1.000164
19500.0	496.7	-6.2	-10.3	73.0	646.9	637.1	156.3	1.6	1.000159
20000.0	487.2	-6.9	-9.5	81.9	630.0	636.4	159.2	2.1	1.000158
20500.0	477.7	-7.8	-9.8	85.4	625.8	635.3	163.6	2.6	1.000155
21000.0	466.5	-8.7	-10.6	86.1	615.9	634.2	177.1	3.4	1.000152
21500.0	459.4	-9.7	-11.5	86.8	608.0	633.0	162.4	4.2	1.000149
22000.0	450.4	-11.8	-12.9	92.0	599.3	630.4	177.7	4.6	1.000146
22500.0	441.6	-12.4	-13.3	93.0	588.8	629.7	174.0	4.8	1.000143
23000.0	433.9	-13.0	-14.0	91.8	570.0	629.0	175.7	4.5	1.000140
23500.0	424.3	-13.5	-15.5	85.1	568.4	623.2	178.0	4.1	1.000137

STATION ALTITUDE 4051.00 FEET MSL  
16 JULY 61 0630 MRS MDT  
ASCENSION NO. 71

UPPER AIR DATA  
19700.071  
JALLEN  
TABLE 6 Cont'

at occult coordinates  
33.16712 LAT DEG  
106.49511 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION (DEGREES) (LINE)	WIND DATA	INDEX OF REFRACTION
44000.0	415.9	-14.4	-18.1	72.9	559.2	027.1	193.8	3.9
43500.0	407.7	-15.8	-19.2	74.9	551.1	025.4	204.2	3.9
42500.0	399.5	-16.8	-21.7	65.2	542.3	024.1	205.7	3.6
42500.0	391.5	-17.9	-22.2	68.9	533.8	022.7	207.6	3.4
42500.0	383.6	-19.1	-22.7	72.7	525.5	021.3	209.9	3.3
42500.0	375.9	-20.3	-23.7	74.1	517.3	019.8	207.1	3.4
42700.0	368.2	-21.4	-26.1	65.3	509.1	018.4	200.3	3.7
42750.0	360.7	-21.9	-30.3	46.3	499.9	017.7	188.0	4.2
428000.0	353.3	-22.6	-31.6	43.4	491.0	016.8	171.1	5.1
428500.0	346.1	-23.3	-32.9	40.6	482.3	015.0	105.4	5.8
429000.0	338.9	-24.6	-33.5	43.8	474.8	014.3	162.6	6.3
429500.0	331.9	-26.1	-33.7	48.6	467.9	012.5	163.9	6.7
430000.0	325.0	-27.3	-35.9	43.1	460.3	011.0	166.3	7.0
430500.0	318.2	-28.4	-38.6	36.7	452.8	009.5	155.2	6.8
431000.0	311.5	-29.6	-41.4	30.3	445.4	008.1	140.3	6.9
431500.0	304.9	-30.7	-44.6	23.9	434.1	006.6	131.0	6.3
432000.0	298.5	-31.9	-47.4	19.6	431.0	005.1	122.9	5.5
432500.0	292.0	-33.2	-47.3	22.4	423.8	003.6	121.6	4.1
433000.0	285.7	-34.4	-47.4	25.2	416.8	002.0	129.6	2.3
433500.0	279.5	-35.7	-47.6	27.9	409.9	000.4	138.2	1.5
434000.0	273.4	-36.9	-47.9	30.7	403.2	098.8	137.9	1.5
434500.0	267.5	-38.2	-48.3	33.5	396.6	097.2	145.0	1.8
435000.0	261.7	-39.5	-48.7	36.2	390.1	095.6	153.8	2.6
435500.0	256.0	-40.7	-49.2	39.0	383.7	093.9	150.0	3.3
436000.0	250.4	-42.0	-49.6	41.8	377.4	092.3	152.8	3.5
436500.0	244.8	-43.3	-51.8	38.0**	370.9	090.7	149.9	3.7
437000.0	239.2	-44.6	-54.0	33.7**	364.5	089.0	158.1	5.9
437500.0	233.7	-45.9	-56.3	29.3**	358.3	087.3	162.1	8.3
438000.0	226.4	-47.2	-58.7	25.0**	352.1	085.6	166.0	11.1
438500.0	220.2	-48.5	-61.3	20.7**	346.1	083.9	168.9	14.3
439000.0	214.1	-49.8	-64.2	16.3**	340.4	082.2	172.7	15.6
439500.0	210.1	-51.1	-67.5	12.0**	334.5	080.5	178.8	15.0
440000.0	206.3	-52.4	-71.6	7.6**	328.7	078.8	165.6	14.6
440500.0	203.5	-53.7	-78.1	3.3**	325.1	077.1	193.1	14.5
441000.0	198.9	-55.0			317.5	075.4	200.6	14.6
441500.0	194.1	-56.1			311.7	073.9	206.0	14.1
442000.0	189.5	-57.3			305.9	072.4	211.7	13.8
442500.0	185.0	-58.5			300.3	070.5	212.0	10.9
443000.0	180.7	-59.6			294.7	069.3	271.4	10.1
443500.0	176.3	-59.6			287.0	069.4	271.4	12.8

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL  
16 JULY 1971 0630 HRS MST  
ASCENSION NO. 71

UPPER AIR DATA  
1970 Jan 71  
JALLEN

GEODETIC COORDINATES  
33.10712 LAT UEG  
106.49511 LONG DEG

TABLE 6 Con't

GEOPHYSIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	REL.HUM. PERCENT	WIND VELOCITY KNOTS	WIND DATA DEGREES (IN) KNOTS	INDEX OF REFRACTION
44000.0	174.1	-59.5	280.0	569.4	306.9	15.2
44500.0	167.9	-60.5	275.1	566.1	313.6	17.7
45000.0	162.9	-61.5	264.7	560.7	313.4	15.4
45500.0	159.9	-62.6	264.5	565.3	313.1	13.1
46000.0	156.0	-63.6	259.4	563.9	326.5	11.6
46500.0	152.2	-64.7	254.4	562.5	347.1	11.5
47000.0	146.5	-65.7	249.3	561.1	60.3	1.000063
47500.0	144.8	-66.7	244.3	559.4	29.0	1.000061
48000.0	141.2	-67.7	239.4	558.4	51.8	1.000060
48500.0	137.7	-69.7	234.5	557.1	71.2	1.000059
49000.0	134.2	-69.6	229.8	555.6	93.5	1.000058
49500.0	130.9	-70.6	225.1	554.5	105.7	1.000057
50000.0	127.6	-70.4	219.2	554.8	111.5	1.000056
50500.0	124.4	-70.2	213.5	555.1	119.6	1.000055
51000.0	121.3	-69.9	207.9	555.4	129.7	6.5
51500.0	118.2	-69.7	202.4	555.6	141.9	6.0
52000.0	115.2	-69.5	197.1	555.9	168.6	5.5
52500.0	112.3	-69.5	192.2	555.9	194.2	6.2
53000.0	109.5	-69.7	187.6	555.6	202.7	6.7
53500.0	106.8	-70.0	183.0	555.3	203.7	6.6
54000.0	104.1	-70.2	176.7	555.0	193.7	6.4
54500.0	101.5	-70.4	174.4	554.7	171.4	6.8
55000.0	98.9	-69.1	168.8	559.0	150.9	8.5
55500.0	96.5	-68.2	164.0	557.7	144.6	9.5
56000.0	94.1	-67.4	159.3	558.6	141.7	10.3
56500.0	91.7	-66.6	154.7	559.8	135.2	10.4
57000.0	89.4	-67.0	151.2	559.5	119.0	9.5
57500.0	87.0	-67.5	147.7	559.7	102.0	9.4
58000.0	85.0	-68.0	144.4	558.1	95.4	1.000033
58500.0	82.9	-68.4	141.1	557.5	91.7	1.000032
59000.0	80.9	-67.9	137.3	558.1	89.2	1.000031
59500.0	78.9	-67.5	135.6	558.7	37.3	1.000030
60000.0	76.9	-66.5	129.6	560.1	65.5	1.000029
60500.0	75.0	-64.4	125.2	562.6	79.1	19.0
61000.0	72.2	-64.6	122.2	562.6	74.1	22.4
61500.0	71.4	-65.0	119.5	562.6	73.1	25.0
62000.0	69.6	-65.4	116.7	561.3	76.1	26.2
62500.0	67.9	-65.2	113.9	561.6	78.9	27.6
63000.0	66.3	-64.4	110.6	562.6	50.8	26.4
63500.0	64.7	-63.0	107.2	564.7	32.0	25.1

STATION ALTITUDE 4051.00 FEET MSL  
16 JULY 61 0630 HRS MDT  
ASCENSION NO. 71

UPPER AIR DATA  
19700311071  
JALLEN  
TABLE 6 Con't

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	AIR DEPOINT DEGREES	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TN)	WIND DATA KNOTS	INDEX OF REFRACTION
64000.0	63.1	-61.6			103.9	590.7	95.6	25.6	1.000023
64500.0	61.6	-60.1			100.7	568.6	89.0	28.6	1.000022
65000.0	60.1	-58.7			97.6	570.5	91.7	31.7	1.000022
65500.0	58.7	-58.8			95.3	570.4	90.2	32.6	1.000021
66000.0	57.3	-59.0			93.1	570.1	100.6	33.4	1.000021
66500.0	55.9	-59.2			91.0	569.9	104.4	35.3	1.000020
67000.0	54.6	-59.4			88.9	569.6	105.2	29.9	1.000020
67500.0	53.3	-59.6			86.9	569.4	106.9	26.5	1.000019
68000.0	52.0	-58.7			84.5	570.5	104.9	24.9	1.000019
68500.0	50.8	-57.7			82.0	571.9	102.0	24.4	1.000018
69000.0	49.6	-56.9			79.8	572.9	99.0	24.0	1.000018
69500.0	48.4	-56.6			77.9	573.2	96.9	23.9	1.000017
70000.0	47.3	-56.4			76.0	573.6	94.9	23.7	1.000017
70500.0	46.2	-56.1			74.1	574.0	92.9	23.5	1.000016
71000.0	45.1	-55.6			72.3	574.3	90.8	23.0	1.000016
71500.0	44.0	-55.6			70.5	574.7	88.5	22.4	1.000016
72000.0	43.0	-55.3			68.8	575.0	87.0	22.4	1.000015
72500.0	42.0	-55.0			67.1	575.4	86.9	23.2	1.000015
73000.0	41.0	-54.8			65.5	575.7	86.8	24.0	1.000015
73500.0	40.1	-54.5			63.9	576.1	86.8	24.3	1.000014
74000.0	39.1	-54.2			62.3	576.4	86.9	24.2	1.000014
74500.0	38.2	-54.0			60.8	576.8	87.0	24.1	1.000014
75000.0	37.3	-53.7			59.3	577.1	87.2	24.1	1.000013
75500.0	36.5	-53.4			57.8	577.5	87.6	24.1	1.000013
76000.0	35.6	-53.2			56.4	577.8	88.0	24.1	1.000013
76500.0	34.8	-52.9			55.0	578.2	87.6	24.3	1.000012
77000.0	34.0	-52.6			53.7	578.5	85.9	25.1	1.000012
77500.0	33.2	-52.3			52.4	579.9	84.3	25.8	1.000012
78000.0	32.4	-52.1			51.1	579.2	83.2	26.7	1.000011
78500.0	31.7	-51.8			49.8	579.6	84.1	28.2	1.000011
79000.0	30.9	-51.5			48.6	579.9	85.0	29.7	1.000011
79500.0	30.2	-51.3			47.4	580.3	85.8	31.2	1.000011
80000.0	29.5	-51.2			46.3	580.4	88.7	31.4	1.000010
80500.0	28.8	-51.1			45.2	580.5	91.7	31.6	1.000010
81000.0	28.2	-51.1			44.2	580.6	94.6	31.8	1.000010
81500.0	27.5	-51.0			43.2	580.6	95.7	31.9	1.000010
82000.0	26.9	-51.0			42.2	580.7	96.0	31.9	1.000009
82500.0	26.3	-50.9			41.2	580.8	96.3	31.8	1.000009
83000.0	25.7	-50.9			40.2	580.9	95.5	32.6	1.000009
83500.0	25.1	-50.8			39.3	580.9	93.6	34.3	1.000009

STATION ALTITUDE 4051.00 FEET MSL  
16 JULY 61 06 30 HRS MDT  
ASCENSION 140. 71

UNIV. AIR. DATA  
19700.0001  
JALLEN

GEOD. COORDINATES  
33.16712 LAT UG  
106.49511 LONG UG

TABLE 6 Cont'd

GEOD. COORDINATES	PRESSURE ALTITUDE MSL FEET	TEMPERATURE AIR DEWPONT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GR/CUBIC METER	SPEED OF SOUND KNOTS	"IN" DATA DIRECTION DEGREES (IN)	SPEED KNOTS	INDEX OF REFRACTION
0.00000.0	24.5	-50.7	36.1	581.0	91.9	36.1	1.000009	
0.04500.0	25.9	-50.6	37.5	581.1	90.4	37.6	1.000008	
0.09000.0	25.4	-50.0	36.5	582.0	89.5	38.3	1.000008	
0.13500.0	24.9	-49.4	35.6	582.8	88.6	39.0	1.000008	
0.18000.0	24.4	-46.7	34.7	583.6	87.6	39.8	1.000008	
0.22500.0	21.8	-48.1	33.8	584.5	87.6	40.8	1.000008	
0.27000.0	21.4	-47.4	33.0	585.3	87.5	41.9	1.000007	
0.31500.0	20.9	-46.8	32.1	586.1	87.4	42.9	1.000007	
0.36000.0	20.4	-46.1	31.3	587.0	87.0	44.1	1.000007	
0.40500.0	19.9	-45.5	30.5	587.7	86.6	45.2	1.000007	
0.45000.0	19.5	-45.1	29.0	588.3	86.1	46.4	1.000007	
0.49500.0	19.1	-44.7	29.1	588.8	86.4	47.6	1.000006	
0.54000.0	18.6	-44.3	28.4	589.3	86.5	49.2	1.000006	
0.58500.0	18.2	-43.9	27.7	589.9	90.4	50.9	1.000006	
0.63000.0	17.8	-43.5	27.0	590.4	92.2	52.5	1.000006	
0.67500.0	17.4	-43.1	26.4	590.9	94.1	51.1	1.000006	
0.72000.0	17.0	-42.7	25.8	591.5	90.1	49.4	1.000006	
0.76500.0	16.7	-42.2	25.1	592.0	98.3	47.7	1.000006	
0.81000.0	16.3	-41.8	24.5	592.5		1.000005		
0.85500.0	15.9	-41.4	24.0	593.0		1.000005		
0.90000.0	15.6	-41.0	23.4	593.5		1.000005		
0.94500.0	15.2	-40.6	22.8	594.1		1.000005		
0.99000.0	14.9	-40.2	22.3	594.6		1.000005		

STATION ALTITUDE 4051.00 FEET MSL  
16 JULY 61 0630 HRS MDT  
ASCESSION NO. 71

MANDATORY LEVELS

1970031071

JALLEN

6E00T TIC COORDINATES  
33.16712 LAT DEG  
106.49511 LON DEG

Table 7

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE DEGREES CENTIGRAU. AIR DEPOINT	REL.HUM. PERCENT	WIND DATA DEGREES (TN) WIRK DIRECTION	SPEED KNOTS
650.0	4911.	21.8	59.	176.2	1.6
600.0	6634.	19.4	10.9	145.4	5.3
750.0	8450.	16.3	8.0	204.2	7.0
700.0	10364.	11.8	4.5	214.7	7.0
650.0	12388.	7.5	2.4	218.7	14.7
600.0	14535.	2.5	-4.4	209.3	10.4
550.0	16830.	-1.1	-6.0	248.8	11.5
500.0	19304.	-6.0	-10.6	172.2	1.3
450.0	21991.	-12.0	-12.9	177.0	4.6
400.0	24930.	-16.7	-21.7	205.0	3.6
350.0	28179.	-22.9	-32.7	167.3	5.5
300.0	31822.	-31.6	-47.4	125.4	5.7
250.0	35963.	-42.1	-49.8	152.6	3.5
200.0	40782.	-54.7	42.	198.0	14.5
175.0	43547.	-59.5	300.3	15.4	
150.0	46674.	-65.3	358.0	12.1	
125.0	50258.	-70.2	117.7	7.5	
100.0	54617.	-69.4	159.0	7.5	
80.0	59020.	-67.7	88.5	15.1	
70.0	61683.	-65.4	75.4	25.9	
60.0	64799.	-58.6	91.7	31.7	
50.0	68554.	-57.0	100.3	24.2	
40.0	73216.	-54.5	88.8	24.3	
30.0	79307.	-51.2	88.4	31.3	
25.0	83199.	-50.8	93.5	34.4	
20.0	88014.	-45.6	86.7	45.0	
15.0	94378.	-40.3			

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL  
16 JULY 1950 HRS MDT  
ASCENSUR. 10. 72

SIGNIFICANT LEVEL DATA  
19700 FEET  
JALLEN

GEODDITIC COORDINATES  
33.16712 LAT DEG  
106.49511 LONG DEG

TABLE 8

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE DEGREES C	AIR DEWPOINT CENTIGRADE	REL. HUM. PERCENT
475.4	4051.0	27.0	14.1	45.0
671.8	4170.5	25.4	13.6	48.0
350.0	4899.1	22.6	13.1	55.0
755.0	8253.7	16.1	6.8	34.0
700.0	10352.7	11.6	5.0	34.0
933.0	13097.2	6.5	0.8	67.0
604.8	14321.4	3.1	0.5	63.0
544.6	17098.7	-1.0	-0.5	66.0
500.0	19321.4	-6.4	-9.3	80.0
490.0	19841.0	-7.1	-7.5	85.0
463.8	21244.9	-9.8	-14.7	67.0
431.3	23079.5	-13.1	-15.7	61.0
400.0	24964.1	-14.7	-22.3	52.0
396.6	25176.7	-15.0	-26.4	37.0
388.3	25701.7	-16.6	-25.0	48.0
366.9	27098.5	-18.7	-33.6	25.0
354.6	29330.9	-25.2	-34.3	42.0
306.0	31910.2	-31.1	-42.0	31.0
276.8	33772.3	-35.5	-46.0	30.0
266.0	34680.5	-37.7	-40.2	40.0
256.0	36078.9	-41.3	-50.0	38.0
227.0	38216.0	-46.0		
200.0	40351.6	-52.6		
182.6	42871.8	-56.6		
169.4	44433.3	-58.6		
156.0	46916.7	-64.8		
136.6	48788.0	-67.4		
125.6	50454.6	-67.9		
109.5	53145.2	-72.4		
105.4	53883.8	-70.6		
102.2	54493.8	-66.3		
100.0	54934.6	-65.5		
81.4	59040.7	-68.0		
76.0	62047.0	-66.2		
66.4	65043.3	-60.1		
50.0	69269.0	-56.9		
38.0	74812.7	-49.4		
36.4	79634.5	-50.7		
28.4	81105.4	-49.4		

STATION ALTITUDE 4051.00 FEET MSL  
16 JULY 81 0950 HRS MDT  
ASCENSION NO. 72

UPPER AIR DATA  
1970030072  
JALLEN

GEOMETRIC PRESSURE TEMPERATURE REL. HUM. SPLIT OF  
ALTITUDE AIR DEWPOINT SOUND  
METERS DEGREES CENTIGRADE  
HSL FEET MILLIBARS DEGREES

4051.0	875.4	27.0	14.1	45.0	1004.0	677.3	*0	*0	1.0010292
4500.0	861.9	24.1	13.4	51.2	1003.1	674.0	147.0	1.3	1.0010290
5000.0	847.0	22.4	12.9	55.0	991.7	672.0	147.0	2.7	1.0010266
5500.0	832.1	21.4	12.0	54.8	977.8	670.8	147.0	4.1	1.0010279
6000.0	817.6	20.5	11.0	54.7	964.1	669.6	150.1	5.3	1.0010273
6500.0	803.3	19.5	10.1	54.5	950.6	668.4	153.0	6.5	1.0010267
7000.0	789.2	18.5	9.2	54.4	937.5	667.2	157.7	6.8	1.0010261
7500.0	775.4	17.6	8.2	54.2	924.2	666.0	162.5	7.4	1.0010255
8000.0	761.8	16.6	7.3	54.1	911.3	664.8	166.7	7.7	1.0010249
8500.0	746.3	15.6	6.6	55.2	896.5	663.6	169.0	8.2	1.0010245
9000.0	732.0	14.5	6.2	57.6	885.7	662.4	165.3	8.6	1.0010241
9500.0	721.6	13.4	5.8	59.9	873.2	661.1	163.2	9.0	1.0010237
10000.0	709.0	12.4	5.4	62.3	860.9	660.0	165.7	8.7	1.0010233
10500.0	696.0	11.3	4.8	64.2	848.6	658.6	169.0	8.2	1.0010229
11000.0	683.6	10.4	4.0	64.7	836.1	657.5	166.5	6.8	1.0010225
11500.0	671.2	9.5	3.3	65.3	823.7	656.4	205.5	6.0	1.0010220
12000.0	659.0	8.5	2.5	65.8	811.5	655.2	219.2	6.7	1.0010216
12500.0	647.0	7.6	1.7	66.3	799.6	654.1	211.2	7.8	1.0010212
13000.0	635.3	6.7	1.0	66.9	787.0	653.0	211.1	9.6	1.0010207
13500.0	623.6	5.4	0.8	72.3	776.9	651.5	213.8	10.7	1.0010205
14000.0	612.1	4.0	0.7	78.8	766.3	649.8	218.2	11.3	1.0010202
14500.0	600.7	2.8	0.1	81.9	755.4	648.5	223.5	11.9	1.0010199
15000.0	589.5	2.1	-1.2	78.8	743.4	647.5	228.6	12.7	1.0010194
15500.0	578.5	1.4	-2.4	75.8	731.7	646.5	230.1	12.9	1.0010189
16000.0	567.7	.6	-3.7	72.7	720.1	645.6	231.2	13.0	1.0010184
16500.0	557.0	-1	-5.0	69.0	708.7	644.7	229.6	11.6	1.0010179
17000.0	546.6	-9	-6.3	66.6	697.5	643.7	227.6	10.3	1.0010175
17500.0	535.3	-2.0	-7.0	68.5	687.2	642.4	226.5	9.1	1.0010172
18000.0	526.1	-3.2	-7.6	71.7	677.1	640.9	223.6	8.3	1.0010169
18500.0	516.0	-4.4	-8.2	74.8	667.3	639.4	218.0	8.7	1.0010166
19000.0	506.2	-5.6	-8.8	78.0	657.6	638.0	210.9	9.6	1.0010163
19500.0	496.5	-6.6	-9.3	81.0	647.6	636.7	202.6	11.2	1.0010160
20000.0	487.0	-7.4	-10.1	81.2	636.9	635.6	197.9	12.4	1.0010157
20500.0	477.5	-8.4	-11.9	75.5	627.0	634.5	194.9	13.2	1.0010153
21000.0	468.3	-9.3	-13.8	69.0	617.5	635.3	193.7	12.9	1.0010149
21500.0	459.1	-10.3	-14.8	68.9	607.5	632.2	194.3	11.4	1.0010146
22000.0	450.1	-11.2	-15.1	72.8	597.6	631.1	198.0	10.1	1.0010144
22500.0	441.3	-12.1	-15.3	76.6	587.9	630.0	206.0	9.1	1.0010141
23000.0	432.7	-13.0	-15.6	80.4	578.4	628.9	215.1	9.4	1.0010139
23500.0	424.1	-13.5	-17.0	74.5	566.1	628.3	222.5	10.6	1.0010136

TABLE 9  
GEODETIC COORDINATES  
23.16712 LAT DEG  
106.49511 LONG DEG

STATION ALTITUDE 4051.00 FEET MSL  
16 JULY 11 0950 HRS MDT  
ASCENSION NO. 12

UPPER AIR DATA  
1970030072  
JALLEN

TABLE 9 Con't

GEOPHYSIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	REL.HUM. PERCENT	DESP. HUM. GM/CUBIC METER	SOUND KNOTS	WIND DATA DEGREES (LTN) WIND (LTN)	WIND SPEED KNOTS	INDEX OF REFRACTION
24000.0	415.7	-13.9	-18.7	66.8	557.9	627.7	224.0	11.1
24500.0	407.5	-14.3	-20.5	59.1	547.1	627.1	225.7	11.2
25000.0	399.4	-14.8	-22.9	49.5	530.0	620.5	219.3	11.0
25500.0	391.5	-16.0	-25.4	43.8	529.9	625.0	212.3	10.8
26000.0	383.6	-17.0	-26.6	43.1	521.5	625.7	204.2	10.5
26500.0	375.9	-17.8	-29.5	34.9	512.6	622.7	194.9	10.2
27000.0	368.4	-18.6	-33.0	26.6	503.6	621.7	180.2	10.1
27500.0	360.9	-19.9	-33.6	28.1	496.2	620.1	179.8	9.7
28000.0	353.5	-21.3	-33.6	31.9	486.8	618.3	173.4	9.4
28500.0	346.3	-22.8	-33.8	35.7	481.0	616.5	171.5	8.9
29000.0	339.2	-24.2	-34.1	39.5	474.5	614.6	169.3	8.3
29500.0	332.2	-25.6	-34.8	41.3	467.3	613.1	169.2	8.3
30000.0	325.3	-26.7	-36.4	39.1	459.7	611.6	169.3	8.4
30500.0	318.4	-27.9	-38.0	37.0	452.2	610.2	170.9	8.7
31000.0	311.8	-29.0	-39.6	34.9	444.8	608.6	172.6	8.9
31500.0	305.3	-30.2	-41.2	32.7	437.5	607.3	172.0	9.4
32000.0	298.8	-31.3	-42.8	31.0	430.4	605.9	170.9	9.8
32500.0	292.4	-32.5	-43.9	30.7	423.3	604.4	168.1	10.7
33000.0	286.2	-33.7	-45.0	30.4	416.3	602.9	165.2	11.8
33500.0	280.1	-34.9	-46.0	30.1	409.4	601.4	163.6	12.2
34000.0	274.1	-36.1	-46.6	32.5	402.6	599.9	163.1	12.1
34500.0	268.1	-37.3	-46.3	38.0	395.9	596.4	162.4	12.3
35000.0	262.3	-38.5	-47.1	39.5	389.3	596.4	161.7	12.7
35500.0	256.5	-39.8	-48.4	38.8	382.9	595.1	161.4	13.2
36000.0	250.9	-41.1	-49.8	38.1	376.6	593.5	163.2	13.7
36500.0	245.3	-42.2	-52.7	30.5**	370.0	592.0	164.9	14.2
37000.0	239.8	-43.3	-56.4	21.6**	363.5	590.6	168.9	13.9
37500.0	234.5	-44.4	-61.5	12.7**	357.1	589.2	175.0	13.3
38000.0	229.2	-45.5	-70.9	3.8**	350.8	587.4	161.5	12.6
38500.0	224.0	-46.7			344.6	585.5	163.2	13.7
39000.0	218.9	-47.9			338.5	584.7	164.9	14.2
39500.0	213.9	-49.1			332.6	583.1	231.1	3.4
40000.0	209.0	-50.3			326.7	581.6	302.0	2.9
40500.0	204.2	-51.5			321.0	580.0	327.3	3.7
41000.0	199.5	-52.7			315.3	578.4	309.1	3.3
41500.0	194.9	-53.7			310.5	574.7	204.3	6.4
42000.0	190.3	-54.8			309.4	577.1	303.1	3.5
42500.0	185.8	-56.8			303.6	575.7	348.6	3.2
43000.0	181.5	-58.4			297.9	574.3	321.3	2.9
43500.0	177.2	-59.4			292.2	573.1	326.7	5.5
					280.1	572.2	336.0	6.5

\*\* AT LAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN CALCULATION.

STATION ALTITUDE 4051.00 FEET MSL  
16 JULY 61 0950 HRS MDT  
ASCENSION NO. 12

UPPER AIR DATA  
1970030072  
JALLEN

OUTLINE COORDINATES  
53.16712 LAT LEG  
106.49511 LON LEG

TABLE 9 Cont

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	AIR DEPOINT PERCENT	REL. HUM. PERCENT	SOUND METER	SOUND DECIBELS (IN)	WIND DATA DIRECTION DEGREES	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4400.0	17.0	-58.0			280.1	571.4	2.9	10.1	1.000062
4450.0	16.8	-58.0			274.4	570.4	9.4	10.8	1.000061
4500.0	16.8	-60.0			269.3	569.8	15.6	11.1	1.000060
4550.0	16.0	-61.3			264.3	567.1	4.6	9.8	1.000059
4600.0	15.6	-62.5			259.5	565.4	36.1	6.8	1.000058
4650.0	15.1	-63.8			254.7	563.7	37.1	9.0	1.000057
4700.0	14.9	-64.9			249.9	562.2	37.3	9.2	1.000056
4750.0	14.5	-65.6			244.5	561.2	40.4	8.4	1.000054
4800.0	14.2	-66.3			239.3	560.3	58.1	5.7	1.000053
4850.0	13.8	-67.0			234.2	559.4	94.9	4.3	1.000052
4900.0	13.5	-67.5			228.9	558.7	124.0	4.8	1.000051
4950.0	13.1	-67.6			223.4	558.5	139.2	6.0	1.000050
5000.0	12.8	-67.8			218.0	558.3	147.6	7.3	1.000049
5050.0	12.5	-68.0			212.8	558.0	141.7	7.6	1.000047
5100.0	12.2	-68.8			208.3	556.9	136.3	8.0	1.000046
5150.0	11.9	-69.6			203.8	555.8	132.9	8.5	1.000045
52000.0	11.6	-70.5			199.5	554.6	131.0	9.0	1.000044
52500.0	11.2	-71.3			195.3	553.5	128.6	9.5	1.000043
53000.0	11.0	-72.2			191.2	552.3	121.4	10.7	1.000043
53500.0	10.7	-71.5			185.8	553.2	115.6	11.9	1.000041
54000.0	10.4	-69.8			179.6	555.5	116.0	11.9	1.000040
54500.0	10.2	-66.3			172.1	560.3	119.2	11.3	1.000038
55000.0	9.7	-65.5			167.2	561.3	123.3	10.3	1.000037
55500.0	9.2	-65.8			163.5	560.9	131.7	8.0	1.000036
56000.0	9.0	-66.1			159.5	560.5	146.2	6.0	1.000036
56500.0	9.5	-66.5			155.6	560.1	148.1	5.6	1.000035
57000.0	9.0	-66.8			152.2	559.7	138.5	6.0	1.000034
57500.0	8.7	-67.1			148.6	559.3	130.5	6.7	1.000033
58000.0	8.3	-67.4			145.2	558.9	118.9	9.1	1.000032
58500.0	8.0	-67.6			141.8	558.4	112.4	11.8	1.000031
59000.0	7.9	-68.0			138.5	558.0	107.0	13.6	1.000031
59500.0	7.5	-67.7			134.9	558.4	101.8	14.7	1.000030
60000.0	7.1	-67.4			131.4	558.8	98.5	15.9	1.000029
60500.0	7.7	-67.1			127.9	559.2	101.2	17.2	1.000028
61000.0	7.3	-66.8			124.0	559.6	103.5	18.5	1.000028
61500.0	7.1	-66.5			121.3	560.0	107.9	20.2	1.000027
62000.0	7.0	-66.2			118.1	560.4	112.3	22.1	1.000026
62500.0	6.5	-65.3			114.7	561.7	114.9	23.6	1.000026
63000.0	6.8	-64.3			111.4	563.1	111.8	23.4	1.000025
63500.0	6.3	-63.2			108.2	564.4	108.6	23.0	1.000024

STATION ALTITUDE 4951.0 FEET MSL  
16 JULY 11 0950 MRS MDT  
ASWLN501. NO. 72

UPPLR AIR DATA  
1970030072  
JALLEN

GEOD. LOC COORDINATES  
33.16712 LAT DEG  
106.49511 LONG DEG

TABLE 9 Con't

GEOPH. THIC	PRESSURE	TEMPERATURE	REL. HUM.	DENSITY	SPEED OF	INDEX
ALTITUDE	MM. Hg	AIR DEWPOINT	PERCENT	GM/CUBIC	SOUND METER	OF
MSL FEET	MM. Hg	DEGREES CENTIGRADE		METER	KNOTS	REFRACTION
6400.0	65.6	-62.2		105.0	565.0	1.000023
6450.0	62.0	-61.2		102.0	567.2	1.000023
6500.0	60.5	-60.2		94.0	568.5	1.000022
6550.0	59.1	-59.7		90.4	569.1	1.000021
6600.0	57.7	-59.3		94.0	569.7	1.000021
6650.0	56.3	-58.9		91.6	570.2	1.000020
6700.0	55.0	-58.5		89.2	570.6	1.000020
6750.0	53.7	-58.1		86.9	571.3	1.000019
6800.0	52.4	-57.7		84.7	571.8	1.000019
6850.0	51.1	-57.3		82.5	572.4	1.000018
6900.0	49.9	-56.9		80.4	572.9	1.000018
6950.0	48.6	-56.2		78.3	573.4	1.000017
7000.0	47.6	-55.6		76.3	574.6	1.000017
7050.0	46.5	-54.9		74.3	575.5	1.000017
71000.0	45.4	-54.3		72.3	576.5	1.000016
71500.0	44.4	-53.7		70.5	577.2	1.000016
72000.0	43.4	-53.0		68.6	578.0	1.000015
72500.0	42.4	-52.4		66.8	578.9	1.000015
73000.0	41.4	-51.7		65.1	579.7	1.000014
73500.0	40.4	-51.1		63.4	580.5	1.000014
74000.0	39.5	-50.4		61.8	581.4	1.000014
74500.0	39.6	-49.8		60.1	582.2	1.000013
75000.0	37.7	-49.5		58.7	582.7	1.000013
75500.0	36.8	-49.6		57.4	582.5	1.000013
76000.0	36.0	-49.7		56.1	582.3	1.000012
76500.0	35.1	-49.9		54.8	582.1	1.000012
77000.0	34.3	-50.0		53.6	582.0	1.000012
77500.0	33.6	-50.1		52.4	581.8	1.000012
78000.0	32.8	-50.3		51.2	581.6	1.000011
78500.0	32.0	-50.4		50.1	581.4	1.000011
79000.0	31.3	-50.5		49.0	581.3	1.000011
79500.0	30.6	-50.7		47.9	581.1	1.000011
80000.0	29.9	-50.4		46.7	581.0	1.000011
80500.0	29.2	-49.9		45.6	582.0	1.000010
81000.0	28.5	-49.5		44.5	582.6	1.000010

STATION ALTITUDE 4651.00 FT MSL  
16 JULY 1950 0950 HRS MDT  
ASSEMBLION NO. 72

MANDATORY LEVELS  
19700.00072  
JALLEN

GEOMETRIC COORDINATES  
33.16712 LAT UEG  
106.49511 LONG E

TABLE 10

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE DEGREES CENTIGRADE	W.L.HUM. PERCENT	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	4896.	22.6	13.1	55.	147.8 2.4
809.6	6620.	19.3	9.9	54.	154.9 6.7
750.0	8432.	15.7	6.7	55.	189.5 8.1
700.0	10343.	11.6	5.0	64.	187.5 8.5
650.0	12367.	7.8	1.9	60.	211.2 7.3
600.0	14518.	2.8	-0.0	62.	223.8 12.0
550.0	16818.	-6.6	-5.8	66.	228.4 10.7
500.0	19295.	-6.4	-9.5	60.	205.5 10.6
450.0	21978.	-11.2	-15.1	73.	198.1 10.1
400.0	24925.	-14.7	-22.3	52.	240.0 11.1
350.0	28198.	-22.0	-33.7	34.	172.0 9.1
300.0	31848.	-31.1	-42.0	31.	171.1 9.7
250.0	36001.	-41.3	-50.0	36.	163.4 13.8
200.0	40854.	-52.6	-52.6	336.9	3.6
175.0	43648.	-57.7	-57.7	359.2	9.8
150.0	46791.	-64.8	-64.8	37.2	9.1
125.0	50405.	-68.1	-68.1	141.4	7.6
100.0	54767.	-65.5	-65.5	122.1	10.7
80.0	59191.	-67.8	-67.8	103.2	14.4
70.0	61836.	-66.2	-66.2	112.4	22.2
60.0	64949.	-60.0	-60.0	98.9	21.7
50.0	68711.	-56.9	-56.9	99.2	26.5
40.0	73413.	-50.8	-50.8	86.2	28.4
30.0	79580.	-50.4	-50.4		

STATION ALTITUDE 4126.59 FEET MSL  
 16 JULY 81 0950 HRS MDT  
 ASCENSION NO. 162

SIGNIFICANT LEVEL DATA  
 1970101010Z  
 HOLLOWAY

GEODETIC COORDINATES,  
 32.88855 LAT DEG  
 196.09965 LON DEG

TABLE 11

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE DEGREES CENTIGRADE	AIR DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
876.1	4126.6	25.2	14.9	53.0
874.2	4189.4	26.0	15.7	53.0
850.0	4999.3	23.3	12.0	51.0
820.4	6013.4	21.5	10.9	51.0
794.6	6321.9	19.8	10.2	54.0
756.4	8311.4	16.8	6.2	57.0
700.0	10468.7	12.6	4.8	59.0
680.8	11234.7	10.9	3.0	58.0
626.2	13508.6	5.8	-1.1	61.0
596.3	14819.1	2.5	-2.4	70.0
565.6	16220.9	0.3	-0.2	77.0
540.4	17419.0	-2.2	-7.1	89.0
505.0	19179.2	-5.9	-9.1	78.0
500.0	19435.7	-6.4	-9.9	76.0
480.4	20460.7	-8.7	-14.0	82.0
465.8	21246.0	-10.2	-13.8	75.0
451.8	22020.3	-10.2	-14.6	70.0
429.0	23329.8	-11.9	-19.9	51.0
400.0	25082.8	-15.1	-24.1	46.0
357.4	27851.8	-21.3	-32.3	36.0
324.4	30181.9	-26.2	-40.3	25.0
300.0	32026.0	-31.1	-37.5	33.0
281.0	33543.0	-34.5	-42.6	43.0
250.0	36200.6	-40.5	-49.9	35.0
200.0	41082.5	-52.4		
163.4	45290.4	-62.6		
150.0	47016.1	-66.0		
138.8	48559.7	-68.4		
135.0	49112.2	-65.8		
120.0	51458.5	-68.1		
109.8	53205.2	-71.2		
100.0	55045.3	-67.8		
93.8	56322.5	-65.6		
87.8	57645.9	-66.5		
82.2	58958.8	-67.7		
77.0	60268.7	-64.0		
71.6	61734.5	-65.4		
70.0	62188.3	-65.2		
59.4	65544.2	-58.6		
50.0	69139.9	-56.3		

STATION ALTITUDE 4126.59 FEET MSL  
16 JULY 81 0950 HRS MDT  
ASCENSION NO. 162

SIGNIFICANT LEVEL DATA

19700.0162  
HOLLOWAY

0.00000 COORDINATES  
32.88886 LAT DEG  
106.09965 LON DEG

TABLE 11

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
41.0	73356.6	-51.0	
30.0	80103.3	-49.3	
22.6	86276.2	-47.1	
20.0	88957.9	-46.9	
15.2	95092.2	-38.5	
12.8	99002.8	-38.8	

STATION ALTITUDE 4126.59 FEET MSL  
16 JULY 01 0950 HRS MDT  
ASCENSION NO. 162

UPPER AIR DATA  
197001162  
HOLLOWAY,

GEODETIC COORDINATES  
32.88865 LAT UEG  
106.09965 LON DEG

TABLE 12

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (TN)	IND. DATA SPEED KNOTS	INDEX OF REFRACTION
4126.6	870.1	25.2	14.9	53.0	1015.5	675.4	180.0	1.0	1.000299
4500.0	864.8	25.0	14.5	52.2	1003.3	675.1	178.9	3.9	1.000294
5000.0	850.0	23.3	12.6	51.0	992.3	673.0	178.4	6.6	1.000284
5500.0	835.3	22.4	11.8	51.0	978.3	671.9	178.2	9.3	1.000278
6000.0	820.4	21.5	11.0	51.0	964.5	670.8	178.6	11.5	1.000272
6500.0	806.5	20.6	10.6	52.6	950.7	669.7	181.6	11.0	1.000268
7000.0	792.4	19.6	10.1	54.2	937.3	668.6	182.7	10.5	1.000264
7500.0	779.5	18.6	9.4	55.2	924.4	667.3	177.4	10.0	1.000259
8000.0	764.8	17.5	8.7	56.3	911.7	666.0	171.9	9.3	1.000254
8500.0	751.3	16.4	7.9	57.2	898.9	664.7	166.0	8.6	1.000249
9000.0	737.9	15.5	7.2	57.6	886.1	663.6	165.0	7.4	1.000244
9500.0	724.8	14.5	6.4	58.4	873.4	662.4	167.6	6.1	1.000239
10000.0	711.9	13.5	5.6	58.6	860.9	661.2	181.6	5.0	1.000234
10500.0	699.2	12.5	4.7	59.0	848.7	660.0	203.3	4.3	1.000229
11000.0	686.6	11.4	3.5	58.3	836.9	658.6	218.4	4.6	1.000223
11500.0	674.2	10.3	2.5	58.3	825.2	657.2	230.6	5.2	1.000218
12000.0	661.9	9.2	1.6	59.0	813.5	655.9	225.0	7.1	1.000214
12500.0	649.9	8.1	.7	59.7	802.0	654.5	221.7	9.1	1.000210
13000.0	638.0	6.9	-2	60.3	790.7	653.2	220.6	10.8	1.000205
13500.0	626.4	5.8	-1.1	61.0	779.6	651.8	219.8	12.3	1.000201
14000.0	614.8	4.6	-1.6	64.4	768.6	650.3	218.7	12.3	1.000198
14500.0	603.4	3.3	-2.1	67.8	757.9	648.8	217.1	12.0	1.000195
15000.0	592.2	2.2	-2.5	70.9	746.8	647.5	214.6	11.2	1.000192
15500.0	581.2	1.4	-2.8	73.4	735.0	646.6	216.0	10.2	1.000189
16000.0	570.3	.6	-3.1	75.9	723.3	645.7	219.9	8.9	1.000186
16500.0	559.6	-.3	-4.1	75.1	712.3	644.5	222.0	7.0	1.000182
17000.0	549.1	-1.3	-5.7	71.8	701.8	643.2	224.1	4.8	1.000177
17500.0	538.7	-2.4	-7.2	69.4	691.3	641.9	215.0	3.8	1.000172
18000.0	528.4	-3.4	-7.7	72.0	680.8	640.6	198.0	3.4	1.000169
18500.0	518.4	-4.5	-8.3	74.5	670.5	639.3	194.2	4.4	1.000167
19000.0	508.5	-5.5	-8.9	77.4	660.4	638.1	194.3	5.7	1.000164
19500.0	498.7	-6.5	-10.2	75.1	650.3	636.8	193.4	6.9	1.000160
20000.0	489.1	-7.7	-12.5	68.3	640.6	635.3	192.5	8.1	1.000155
20500.0	479.7	-8.8	-14.6	62.7	631.1	633.9	193.7	8.7	1.000151
21000.0	470.3	-9.7	-14.0	70.9	621.0	632.8	194.9	9.3	1.000150
21500.0	461.2	-10.2	-14.0	73.4	609.9	632.3	201.4	8.8	1.000147
22000.0	452.2	-10.2	-14.6	70.1	598.1	632.3	208.0	8.4	1.000144
22500.0	443.3	-10.8	-16.5	63.0	587.9	631.4	212.8	8.7	1.000140
23000.0	434.6	-11.5	-18.5	55.8	577.9	630.6	216.3	9.0	1.000137
23500.0	426.1	-12.2	-20.3	50.5	568.2	629.6	217.1	9.1	1.000133

STATION ALTITUDE 4126.59 FEET MSL  
16 JULY 81 0950 HRS MDT  
ASCENSION NO. 162

UPPER AIR DATA  
1970010162  
HOLLOMAN

TABLE 12

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEPOINT CENTIGRADE	REL.HUM. PERCENT	SOUND METER	WIND DATA		INDEX OF REFRACTION
						GM/CUBIC METER	DEGREES (IN)	
24000.0	417.7	-13.1	-21.5	49.1	559.0	628.5	217.0	9.0
24500.0	409.4	-14.0	-22.7	47.7	549.9	627.4	214.0	8.6
25000.0	401.3	-14.9	-23.9	46.2	541.0	626.3	210.6	8.2
25500.0	393.3	-16.0	-25.3	44.5	532.4	624.9	206.3	8.0
26000.0	385.4	-17.2	-26.8	42.7	524.1	623.5	202.4	7.8
26500.0	377.6	-18.3	-28.3	40.9	515.8	622.1	199.6	7.6
27000.0	370.0	-19.4	-29.8	39.1	507.7	620.8	194.3	7.2
27500.0	362.6	-20.5	-31.3	37.3	499.7	619.4	179.5	6.5
28000.0	355.2	-21.6	-32.8	35.3	491.7	618.0	163.6	6.1
28500.0	347.9	-22.7	-34.5	32.9	483.7	616.7	149.1	5.8
29000.0	340.7	-23.7	-36.1	30.6	475.7	615.4	137.7	6.0
29500.0	333.7	-24.8	-37.9	28.2	467.9	614.1	130.7	6.5
30000.0	326.9	-25.8	-39.6	25.9	460.3	612.7	125.9	7.0
30500.0	320.1	-27.0	-39.3	29.8	452.9	611.2	140.6	8.0
31000.0	313.3	-28.4	-38.3	37.4	445.8	609.6	144.1	9.1
31500.0	306.8	-29.7	-37.8	45.0	438.8	607.9	147.6	9.7
32000.0	300.3	-31.0	-37.5	52.6	432.0	610.3	150.7	10.3
32500.0	293.9	-32.2	-39.1	49.9	424.8	604.9	149.9	10.4
33000.0	287.7	-33.3	-40.8	46.6	417.7	602.4	148.0	10.4
33500.0	281.5	-34.4	-42.5	43.3	410.7	602.0	148.8	10.2
34000.0	275.4	-35.5	-43.9	41.6	403.7	600.6	150.8	9.9
34500.0	269.4	-36.7	-45.2	40.1	396.8	599.1	157.0	9.7
35000.0	263.6	-37.8	-46.6	38.6	390.0	597.7	165.6	9.9
35500.0	257.8	-38.9	-48.0	37.1	383.4	596.3	171.9	10.5
36000.0	252.2	-34.0	-42.5	35.6	376.9	594.8	176.3	11.6
36500.0	246.6	-41.2	-51.1	32.9**	370.4	595.3	179.2	12.3
37000.0	241.0	-42.4	-53.2	29.3**	363.9	591.7	160.8	12.2
37500.0	235.6	-43.7	-55.4	25.7**	357.6	590.2	162.6	12.0
38000.0	230.3	-44.9	-57.6	22.1**	351.4	588.6	166.4	10.5
38500.0	225.1	-46.1	-60.1	18.5**	345.3	587.0	191.5	9.0
39000.0	220.0	-47.3	-62.7	14.9**	339.3	585.4	197.5	7.5
39500.0	215.0	-48.5	-65.7	11.3**	333.5	583.9	205.9	6.3
40000.0	210.1	-49.8	-69.4	7.8**	327.7	582.3	226.5	4.5
40500.0	205.4	-51.0	-74.5	4.2**	322.1	580.7	209.0	3.9
41000.0	200.8	-52.2	-87.0	6.4**	316.5	579.1	303.5	5.2
41500.0	196.0	-53.4			310.8	577.5	322.5	6.0
42000.0	191.4	-54.6			305.1	575.9	333.5	6.9
42500.0	186.8	-55.8			299.8	574.3	341.1	9.3
43000.0	182.4	-57.0			294.0	572.7	349.5	8.9
43500.0	178.1	-58.3			288.7	571.1	358.6	8.7

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4126.59 FEET MSL  
 16 JULY 16 0950 HRS MDT  
 ASCENSION NO. 162

UPPER AIR DATA  
 1970010162  
 HOLLOWAY

GEODETIC COORDINATES  
 J2.88865 LAT ULG  
 106.09965 LON UEG

TABLE 12 Con't

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (IN) KNOTS	WIND DATA SPEED KNOTS	INFLUX OF REFRACTION
44000.0	173.8	-59.5		283.4	569.5	110.3	8.2	1.000063
44500.0	169.7	-60.7		276.3	567.9	25.0	8.1	1.000062
45000.0	165.7	-61.9		273.2	566.2	35.0	8.6	1.000061
45500.0	161.7	-63.0		268.1	564.7	41.4	9.4	1.000060
46000.0	157.8	-64.0		262.7	563.4	46.9	10.3	1.000059
46500.0	153.9	-65.0		257.5	562.1	51.6	11.1	1.000057
47000.0	150.1	-66.0		252.4	560.8	52.7	12.0	1.000056
47500.0	146.4	-66.8		247.1	559.7	67.2	12.2	1.000055
48000.0	142.8	-67.5		241.9	558.6	61.8	12.7	1.000054
48500.0	139.2	-68.3		236.8	557.6	95.7	13.2	1.000053
49000.0	135.8	-66.3		226.7	560.3	111.8	13.1	1.000051
49500.0	132.4	-66.2		222.8	560.5	120.7	14.1	1.000050
50000.0	129.1	-66.7		217.8	559.6	136.9	11.3	1.000049
50500.0	125.9	-67.2		212.9	559.1	153.1	8.9	1.000047
51000.0	122.8	-67.7		206.2	558.5	169.8	7.4	1.000046
51500.0	119.7	-68.2		203.5	557.8	184.6	6.4	1.000045
52000.0	116.7	-69.1		199.3	556.6	200.7	5.9	1.000044
52500.0	113.8	-69.9		195.1	555.3	171.9	6.2	1.000043
53000.0	111.0	-70.8		191.0	554.1	150.3	7.8	1.000043
53500.0	108.2	-70.7		186.1	554.4	130.1	9.7	1.000041
54000.0	105.5	-69.7		180.6	555.6	125.7	11.7	1.000040
54500.0	102.8	-68.8		175.3	556.9	118.5	14.0	1.000039
55000.0	100.2	-67.9		170.1	558.2	119.4	14.3	1.000038
55500.0	97.7	-67.0		165.2	559.3	121.0	14.4	1.000037
56000.0	95.3	-66.2		160.4	560.5	122.0	14.3	1.000036
56500.0	93.0	-65.7		156.1	561.1	121.4	13.9	1.000035
57000.0	90.7	-66.1		152.5	560.6	120.7	13.5	1.000034
57500.0	88.4	-66.4		149.0	560.2	116.9	13.5	1.000033
58000.0	86.3	-66.8		145.6	559.6	112.2	13.7	1.000032
58500.0	84.1	-67.3		142.3	559.9	108.0	13.9	1.000032
59000.0	82.0	-67.6		139.0	556.6	105.0	14.0	1.000031
59500.0	80.0	-66.2		134.7	560.5	102.0	14.1	1.000030
60000.0	78.0	-64.8		130.5	562.4	102.1	14.5	1.000029
60500.0	76.1	-64.2		126.9	563.1	103.6	15.1	1.000028
61000.0	74.3	-64.7		124.1	562.5	105.4	15.8	1.000028
61500.0	72.4	-65.2		121.3	561.8	110.7	17.4	1.000027
62000.0	70.7	-65.3		118.4	561.7	115.0	19.2	1.000026
62500.0	68.9	-64.6		115.2	562.6	115.0	20.1	1.000026
63000.0	67.3	-63.9		111.0	563.9	114.0	20.3	1.000025
63500.0	65.6	-62.6		108.0	562.3	112.2	20.5	1.000024

STATION ALTITUDE 4126.59 FFT MSL  
16 JULY 81 0950 HRS MDT  
ASCENSION NO. 162

UPPER AIR DATA  
1970010162  
HOLLOMAY

GEODETIC COORDINATES  
32.88465 LAT UEG  
106.09965 LON UEG

TABLE 12 Con't

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	DEWPOINT DEGREES	REL.HUM. PERCENT	SHELF METER	DENSITY GM/CUBIC METER	SOUND SPEED KNOTS	WIND DATA DIRECTION DEGREES (IN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
64000.0	64.1	-61.6	-58.0	105.5	5666.6	109.5	106.0	20.5	1.000023	
64500.0	62.5	-60.7	-59.7	102.5	5677.9	102.5	106.0	20.4	1.000023	
65000.0	61.0	-59.7	-58.7	99.5	5694.2	103.9	103.9	20.7	1.000022	
65500.0	59.5	-58.7	-57.0	96.7	5707.5	103.2	103.2	21.2	1.000022	
66000.0	58.1	-58.3	-57.0	94.2	5711.0	102.5	102.5	21.8	1.000021	
66500.0	56.7	-58.0	-57.0	91.9	5714.4	100.7	100.7	22.1	1.000020	
67000.0	55.4	-57.7	-55.8	89.6	5719.9	98.2	98.2	22.4	1.000020	
67500.0	54.1	-57.3	-55.2	87.3	5723.3	96.3	96.3	22.7	1.000019	
68000.0	52.8	-57.0	-54.6	85.1	5727.7	94.9	94.9	23.9	1.000019	
68500.0	51.6	-56.7	-54.6	83.0	5731.1	93.0	93.0	25.2	1.000018	
69000.0	50.3	-56.4	-54.0	80.9	5734.6	91.2	91.2	25.7	1.000018	
69500.0	49.0	-55.8	-52.7	78.8	5744.3	88.5	88.5	24.8	1.000018	
70000.0	48.0	-55.2	-52.1	76.6	5755.1	81.4	81.4	24.0	1.000017	
70500.0	46.9	-54.6	-51.4	74.8	5759.9	80.0	80.0	23.8	1.000017	
71000.0	45.6	-54.0	-51.0	72.8	5764.8	81.2	81.2	23.8	1.000016	
71500.0	44.7	-53.3	-50.7	70.9	5777.6	82.3	82.3	23.8	1.000016	
72000.0	43.7	-52.7	-50.0	69.1	5784.4	80.8	80.8	25.6	1.000015	
72500.0	42.7	-52.1	-49.6	67.3	5794.2	91.1	91.1	27.9	1.000015	
73000.0	41.7	-51.4	-49.0	65.5	5804.1	94.5	94.5	30.3	1.000015	
73500.0	40.7	-51.0	-49.7	63.9	5807.7	92.9	92.9	30.1	1.000014	
74000.0	39.6	-50.6	-49.7	62.4	5809.9	91.5	91.5	30.0	1.000014	
74500.0	38.9	-50.7	-49.0	60.9	5814.0	90.0	90.0	29.8	1.000014	
75000.0	38.0	-50.6	-49.6	59.5	5814.2	89.8	89.8	29.4	1.000013	
75500.0	37.1	-50.5	-49.1	58.1	5814.4	89.6	89.6	29.0	1.000013	
76000.0	36.3	-50.3	-49.7	56.7	5814.5	89.6	89.6	28.8	1.000013	
76500.0	35.4	-50.2	-49.6	55.4	5814.7	89.6	89.6	28.8	1.000012	
77000.0	34.6	-50.1	-49.6	54.1	5814.9	89.7	89.7	28.9	1.000012	
77500.0	33.6	-50.0	-49.6	52.8	5815.0	89.9	89.9	28.7	1.000012	
78000.0	33.1	-49.8	-49.6	51.6	5815.2	90.1	90.1	28.6	1.000011	
78500.0	32.3	-49.7	-49.0	50.4	5824.3	90.4	90.4	28.4	1.000011	
79000.0	31.6	-49.6	-48.9	49.2	5824.5	92.9	92.9	27.9	1.000011	
79500.0	30.8	-49.5	-48.8	48.0	5824.7	95.9	95.9	27.4	1.000011	
80000.0	30.1	-49.3	-48.9	46.9	5824.8	98.9	98.9	27.0	1.000010	
80500.0	29.5	-49.2	-48.9	45.6	5834.1	100.9	100.9	27.6	1.000010	
81000.0	28.8	-49.0	-48.7	44.7	5834.3	102.8	102.8	28.3	1.000010	
81500.0	28.1	-48.8	-48.6	43.7	5834.5	103.0	103.0	29.1	1.000010	
82000.0	27.5	-48.6	-48.4	42.7	5834.6	102.3	102.3	30.3	1.000009	
82500.0	26.9	-48.4	-48.3	41.7	5834.0	100.9	100.9	31.5	1.000009	
83000.0	26.3	-48.3	-48.3	40.7	5834.2	99.5	99.5	32.8	1.000009	
83500.0	25.7	-48.3	-48.3	39.7	5834.4	98.3	98.3	33.8	1.000009	

STATION ALTITUDE 4126.59 FEET MSL  
16 JULY 01 0950 HRS MDT  
ASCENSION NO. 162

UPPLR AIR DATA  
19700101012  
MILLIBARS

OUT TIC COORDINATES  
32.8886 LAT DEG  
106.09965 LON DEG

TABLE 12 Con't

GEOP. TELL	PRESSURE	TEMPERATURE	REL.HUM.	DENSITY	INDEX
ALTITUDE MSL FEET	MMILLIARS	AIR DEPOINT DEGREES	PERCENT	GM/CUBIC METER	REFRACTION
84000.0	25.1	-47.9	30.8	584.7	1.000009
84500.0	24.5	-47.7	37.9	584.9	1.000008
85000.0	24.0	-47.6	37.0	585.1	37.0
85500.0	23.4	-47.4	36.1	585.4	38.2
86000.0	22.9	-47.2	35.3	585.6	39.5
86500.0	22.4	-47.1	34.5	585.8	40.5
87000.0	21.9	-47.0	33.7	585.8	41.3
87500.0	21.4	-47.0	32.9	585.8	42.0
88000.0	20.9	-47.0	32.2	585.9	42.8
88500.0	20.4	-46.9	31.4	585.9	43.2
89000.0	20.0	-46.8	30.7	586.1	43.8
89500.0	19.5	-46.2	30.0	586.9	44.4
90000.0	19.1	-45.5	29.2	587.8	45.1
90500.0	18.7	-44.8	28.5	588.7	45.9
91000.0	18.3	-44.1	27.8	589.6	46.8
91500.0	17.9	-43.4	27.1	590.5	46.5
92000.0	17.5	-42.7	26.4	591.4	45.9
92500.0	17.1	-42.0	25.7	592.2	41.4
93000.0	16.7	-41.4	25.1	593.1	38.9
93500.0	16.3	-40.7	24.5	594.0	38.7
94000.0	16.0	-40.0	23.8	594.9	38.8
94500.0	15.6	-39.3	23.3	595.7	38.9
95000.0	15.3	-38.6	22.7	596.6	38.7
95500.0	14.9	-38.5	22.2	596.7	38.6
96000.0	14.6	-38.6	21.7	596.7	43.3
96500.0	14.3	-38.6	21.2	596.6	43.5
97000.0	14.0	-38.6	20.8	596.6	41.00005
97500.0	13.7	-38.7	20.3	596.5	41.00005
98000.0	13.4	-38.7	19.9	596.5	41.00004
98500.0	13.1	-38.6	19.4	596.4	41.00004
99000.0	12.8	-38.6	19.0		1.000004

STATION ALTITUDE 4126.59 FEET MSL  
16 JULY 81  
ASCENSION NO. 102  
0950 HRS MDT

MANDATORY LEVELS  
1970010162  
HOLLOWAY

GEODETIC COORDINATES  
32.88865 LAT DEG  
106.09965 LON DEG

TABLE 13

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE DEGREES	AIR DEPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA	
					DEGREES	DIRECTION DEGREES (TN)
450.0	4996.	23.3	12.0	51.	176.4	6.6
400.0	6725.	20.2	10.4	53.	185.1	10.8
750.0	8542.	16.3	7.9	57.	165.4	6.5
700.0	10459.	12.6	4.8	59.	201.6	4.4
650.0	12486.	8.1	•7	60.	221.8	9.1
600.0	14637.	2.9	-2.2	69.	216.5	11.8
550.0	16936.	-1.2	-5.6	72.	223.8	5.0
500.0	19409.	-6.4	-9.9	76.	193.5	6.7
450.0	22088.	-10.3	-15.0	69.	209.6	8.4
400.0	25041.	-15.1	-24.1	40.	210.0	8.2
350.0	28308.	-22.4	-34.0	34.	153.8	5.9
300.0	31962.	-31.1	-37.5	53.	150.8	10.3
250.0	36121.	-40.5	-49.9	35.	177.7	12.0
200.0	40983.	-52.4			306.5	5.3
175.0	43772.	-59.1			7.7	8.3
150.0	46889.	-66.0			55.6	12.0
125.0	50502.	-67.3			158.5	8.4
100.0	54875.	-67.8			119.4	14.3
80.0	59303.	-66.2			102.2	14.1
70.0	61976.	-65.2			116.2	19.7
60.0	65102.	-59.0			103.4	21.0
50.0	68880.	-56.3			90.2	25.4
40.0	73593.	-50.9			91.8	30.1
30.0	79760.	-49.3			99.2	27.1
25.0	83695.	-47.9			97.0	34.9
20.0	88539.	-46.9			92.0	43.7
15.0	94916.	-38.5			87.4	41.1

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

END

DATE  
FILMED

9-81

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